

AMENDMENTS TO THE CLAIMS

1. (Currently Amended) A modular prosthesis for replacing an end portion of a bone, the prosthesis comprising:
 - a stem dimensioned to be received in the intramedullary canal of the bone;
 - a head having an outer wall defining an interior space dimensioned such that the head can be placed [[in]] over an end portion of the stem, the outer wall having an opening, the outer wall being dimensioned such that the head can be translated in an axial direction in relation to an axis of the stem and the head can be translated in a transverse direction in relation to the axis of the stem when the end portion of the stem is placed in the interior space of the head, the outer wall of the head of the prosthesis including a concave surface dimensioned to interface with another bone when the head of the prosthesis is secured to the stem; and
 - a screw dimensioned to be arranged in the opening,
 - wherein the screw is suitable for contacting the end portion of the stem when arranged in its associated opening to secure the head to the stem by constraining movement of the head in the axial direction and in the transverse direction, and
 - wherein the opening is in a lateral direction in relation to the axis of the stem, and
 - wherein an interior surface of the outer wall of the head adjacent the opening is spaced from the end portion of the stem when the head is secured to the stem, and
 - wherein the end portion of the stem includes an end surface and a side surface extending away from the end surface, the side surface having a curved periphery when viewed in a cross-section transverse to the axis of the stem, and

wherein the screw contacts the side surface of the end portion of the stem when the head is secured to the stem.

2. (Previously Presented) The prosthesis of claim 1 wherein:
the screw is a self-tapping screw suitable for tapping into the end portion of the stem, and

the screw is inserted to a depth below a surface of the end portion of the stem to secure the head to the stem.

3. (Canceled)

4. (Previously Presented) The prosthesis of claim 1 wherein:
the outer wall of the head has three openings, and two of the three openings are on opposed sides of the outer wall.

5. (Previously Presented) The prosthesis of claim 1 wherein:
the outer wall is dimensioned such that the head can be moved in a second transverse direction in relation to the axis of the stem at an angle to the transverse direction when the head is placed over the end portion of the stem, and
the screw is suitable for contacting the end portion of the stem when arranged in its associated opening to constrain movement of the head in the second transverse direction.

6. (Previously Presented) The prosthesis of claim 1 wherein:
the prosthesis is adapted to replace a radial head.

7. (Previously Presented) The prosthesis of claim 6 wherein:
the head of the prosthesis is elliptical, and
the concave surface of the head is dimensioned to interface with the capitellum
of the humerus and the outer wall of the head of the prosthesis includes a periphery
surface dimensioned to interface with the radial notch of the ulna when the head of the
prosthesis is secured to the stem.

8. (Currently Amended) A modular prosthesis for replacing an end portion
of a bone, the prosthesis comprising:
a stem dimensioned to be received in the intramedullary canal of the bone;
a head having an outer wall defining an interior space dimensioned such that the
head can be placed [[in]] over an end portion of the stem, the outer wall having an
opening, the outer wall being dimensioned such that the head can be translated in a first
transverse direction in relation to an axis of the stem and the head can be translated in
a second transverse direction in relation to the axis of the stem at an angle to the first
transverse direction when the end portion of the stem is placed in the interior space of
the head, the outer wall of the head of the prosthesis including a concave surface
dimensioned to interface with another bone when the head of the prosthesis is secured
to the stem; and
a screw dimensioned to be arranged in the opening,

wherein the screw is suitable for contacting the end portion of the stem when arranged in its associated opening to secure the head to the stem by constraining movement of the head in the first transverse direction and in the second transverse direction, and

wherein the opening is in a lateral direction in relation to the axis of the stem, and wherein an interior surface of the outer wall of the head adjacent the opening is spaced from the end portion of the stem when the head is secured to the stem, and wherein the end portion of the stem includes a top end surface and a side surface extending away from the end surface, the side surface having a curved periphery when viewed in a cross-section transverse to the axis of the stem, and wherein the screw contacts the side surface of the end portion of the stem when the head is secured to the stem.

9. (Previously Presented) The prosthesis of claim 8 wherein: the prosthesis is adapted to replace a radial head.

10. (Previously Presented) The prosthesis of claim 9 wherein: the head of the prosthesis is elliptical, and the concave surface of the head is dimensioned to interface with the capitellum of the humerus and the outer wall of the head of the prosthesis includes a periphery surface dimensioned to interface with the radial notch of the ulna when the head of the prosthesis is secured to the stem.

11-26. (Canceled)

27. (Currently Amended) A modular prosthesis for replacing an end portion of a bone, the prosthesis comprising:

a stem dimensioned to be received in the intramedullary canal of the bone;

a head having an outer wall defining an interior space dimensioned such that the head can be placed over an end portion of the stem, the outer wall having an opening, the outer wall being dimensioned such that the head can be moved in an axial direction in relation to an axis of the stem and the head can be moved in a transverse direction in relation to the axis of the stem when the head is placed over the end portion of the stem; and

a screw dimensioned to be arranged in the opening,

wherein the screw is suitable for contacting the end portion of the stem when arranged in its associated opening to secure the head to the stem by constraining movement of the head in the axial direction and in the transverse direction, and

wherein the opening is in a lateral direction in relation to the axis of the stem, and

wherein an interior surface of the outer wall of the head adjacent the opening is spaced from the end portion of the stem when the head is secured to the stem, and

wherein the end portion of the stem includes a top end surface and a side surface extending away from the end surface, the side surface having a curved periphery when viewed in a cross-section transverse to the axis of the stem, and

wherein the screw contacts the side surface of the end portion of the stem when the head is secured to the stem, and

wherein the prosthesis is adapted to replace a radial head, and
wherein the head of the prosthesis is elliptical, and
wherein the outer wall of the head of the prosthesis includes a concave surface
dimensioned to interface with the capitellum of the humerus and a periphery surface
dimensioned to interface with the radial notch of the ulna when the head of the
prosthesis is secured to the stem.

28. (Previously Presented) The prosthesis of claim 27 wherein:
the screw is a self-tapping screw suitable for tapping into the end portion of the
stem, and
the screw is inserted to a depth below a surface of the end portion of the stem to
secure the head to the stem.

29. (Previously Presented) The prosthesis of claim 27 wherein:
the outer wall of the head has three openings, and two of the openings are on
opposed sides of the outer wall.

30. (Previously Presented) The prosthesis of claim 27 wherein:
the outer wall is dimensioned such that the head can be moved in a second
transverse direction in relation to the axis of the stem at an angle to the transverse
direction when the head is placed over the end portion of the stem, and

the screw is suitable for contacting the end portion of the stem when arranged in its associated opening to constrain movement of the head in the second transverse direction.

31. (Currently Amended) A modular prosthesis for replacing an end portion of a bone, the prosthesis comprising:

a stem dimensioned to be received in the intramedullary canal of the bone;

a head having an outer wall defining an interior space dimensioned such that the head can be placed over an end portion of the stem, the outer wall having an opening, the outer wall being dimensioned such that the head can be moved in a first transverse direction in relation to an axis of the stem and the head can be moved in a second transverse direction in relation to the axis of the stem at an angle to the first transverse direction when the head is placed over the end portion of the stem; and

a screw dimensioned to be arranged in the opening,

wherein the screw is suitable for contacting the end portion of the stem when arranged in its associated opening to secure the head to the stem by constraining movement of the head in the first transverse direction and in the second transverse direction, and

wherein the opening is in a lateral direction in relation to the axis of the stem, and

wherein an interior surface of the outer wall of the head adjacent the opening is spaced from the end portion of the stem when the head is secured to the stem, and

wherein the end portion of the stem includes an end surface and a side surface extending away from the end surface, the side surface having a curved periphery when viewed in a cross-section transverse to the axis of the stem, and

wherein the screw contacts the side surface of the end portion of the stem when the head is secured to the stem, and

wherein the prosthesis is adapted to replace a radial head, and

wherein the head of the prosthesis is elliptical, and

the outer wall of the head of the prosthesis includes a concave surface dimensioned to interface with the capitellum of the humerus and a periphery surface dimensioned to interface with the radial notch of the ulna when the head of the prosthesis is secured to the stem.

32. (Previously Presented) The prosthesis of claim 31 wherein:

the screw is a self-tapping screw suitable for tapping into the end portion of the stem, and

the screw is inserted to a depth below a surface of the end portion of the stem to secure the head to the stem.

33. (Previously Presented) The prosthesis of claim 31 wherein:

the outer wall of the head has three openings, and two of the three openings are on opposed sides of the outer wall.